

**ABSTRACT**

The present invention relates to a sterile calcium-free low bicarbonate dialysis concentrate composition for use in conjunction with regional citrate anti-coagulation in the context of either dialysis or hemofiltration. Methods of use of the sterile calcium free low bicarbonate dialysis concentrate compositions are also disclosed. The low bicarbonate concentrate takes into account the fact that citrate is hepatically metabolized into bicarbonate, thus minimizing metabolic complications.